

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	DA 12-701
Governing Radiated Power Limits in the	)	
Cellular Radio Service Frequency Bands	)	RM-11660
	)	

**COMMENTS**

Bluegrass Cellular, Inc. and its affiliates, providers of Bluegrass Wireless service ("Bluegrass Wireless"), hereby submit Comments in response to the Federal Communications Commission's Public Notice released May 2, 2012 in the referenced proceeding.<sup>1</sup> Comment is sought on a petition filed by AT&T Services, Inc. and its subsidiaries ("AT&T") seeking a waiver and expedited rulemaking to modify FCC rules for cellular base station Effective Radiated Power ("ERP").

Bluegrass Wireless is open to FCC initiation of a rulemaking to consider modification of FCC Rule Section 22.913 to make cellular Effective Radiated power ("ERP") rules more consistent with other mobile broadband services. However, Bluegrass Wireless opposes grant of a waiver to AT&T, preferring industry wide consideration and input before adoption of ERP rule modifications. The FCC should receive comments from interested parties and assess the impact of ERP rule changes on all cellular carriers before a single carrier is authorized to operate under modified power limits.

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<sup>1</sup> *Public Notice*, DA 12-701, released May 2, 2012 ("Public Notice"). The deadline for submission of these Comments is June 1, 2012, as determined by the Public Notice.

## **I. Background**

AT&T requests an expedited rulemaking wherein the FCC would restate cellular base station ERP limits as Power Spectral Density (“PSD”) limits with a limit of 250 watts/MHz in non-rural areas and 500 watts/MHz in rural areas, so that cellular licensees may efficiently utilize spectrum for broadband services. AT&T also asks the FCC to grant AT&T a waiver of Section 22.913 of Commission rules, so that AT&T may utilize PSD limits to expedite Long Term Evolution (“LTE”) deployment in AT&T’s cellular spectrum.

## **II. Any cellular power emission rule modifications should be considered in a rulemaking proceeding.**

Bluegrass Wireless would support the FCC in commencing a rulemaking proceeding to receive comments and assess whether modifications are warranted to FCC Rule Section 22.913. Bluegrass does not oppose the possibility of restating ERP limits for cellular base stations, using a PSD model. Interested parties should comment on whether radiated power levels calculated on a “watts-per-MHz” basis would yield effective power limits that increase proportionally with bandwidth used, or whether alternative models are preferable.

Originating thirty years ago, the FCC rule on maximum ERP was based on analog technology using 30 KHz channels. The PSD was the same for all operators. Present day wireless operations deploy digital technologies (2G and 3G) using GSM-UMTS or CDMA-EVDO. Depending on the technology and channel bandwidth, the PSD is different for different operators. Current power limits in cellular networks favor narrowband emissions systems and penalize wideband emissions. PCS and AWS use PSD emission per MHz for efficient use of spectrum.

However, any change to the ERP rule must include an appropriate transition time so that carriers such as Bluegrass Wireless are not competitively disadvantaged. As demonstrated in the attached Declaration of Leila Rezanavaz, Telecommunications Electrical Engineer, time will be required for adjacent carriers to prevent harmful interference and to re-measure and renegotiate 32 dBu service area boundary extension agreements.

**II. The FCC should deny AT&T's request for a waiver of the cellular base station power limits.**

AT&T understandably would benefit from a waiver of the ERP limits to expedite its LTE build out. However a waiver is not justified under FCC standards and, indeed, would result in harmful interference to adjacent CDMA carrier operations.

A. AT&T's proposed PSD measurements are harmful to Bluegrass Wireless.

Being a GSM\_UMTS operator, AT&T refers in its petition to the advantages of using PSD only in GSM networks. AT&T performed an interference study that concerns two neighboring GSM networks. If AT&T is granted a waiver and starts operating almost immediately at higher power near the borders of Bluegrass Wireless' CDMA markets, AT&T will inject increased signal energy into Bluegrass Wireless' bordering areas, increasing the noise level in those areas. The quality of Bluegrass Wireless' coverage will be jeopardized as the energy-over-noise value decreases. Bluegrass Wireless thereby will be harmed if AT&T is granted a waiver of the cellular base station power limits.

As noted in Ms. Rezanavaz' Declaration, "AT&T base stations operating at higher power levels will cause stronger signals across the border into Bluegrass markets, which will increase the noise level in those markets." Ms. Rezanavaz goes on to explain:

In CDMA (1XRTT and EVDO) networks, the Signal-to-Noise (“S/N”) ratio is a critical factor in performance quality and system throughput. The stronger signals from AT&T sites inside Bluegrass’ markets will cause reduction in the value of S/N ratio in Bluegrass’ markets. This will result in reduced system coverage and capacity and compromised system quality and customer service. The stronger signals from AT&T’s neighboring markets will cause harmful interference not only to the Bluegrass’ CDMA downlink (base station to mobile) by increasing the noise level, but also to the CDMA uplink (Mobile to base station) as Bluegrass’ mobile stations will power up upon seeing the strong signal from the neighboring AT&T market, which causes uplink interference as well.

AT&T also overlooks established service area boundary extension agreements using 32 dBu contours under a formula prescribed by the FCC using ERP as a parameter. These agreements define service contours and Cellular Geographic Service Area Boundaries. If PSD replaces ERP for power, neighboring carriers will have to re-measure coverage and recast interference extensions. Existing contour extension and protected service area agreements will be jeopardized, and likely will have to be renegotiated using the new base station power limits.

B. AT&T’s unwarranted waiver request is not in the public interest.

Grant of AT&T’s requested waiver would undermine the policy objective of the rule in question, Section 22.913, which provides a level standard by which all cellular operators measure their own and one another’s signals. Permitting AT&T to bolt ahead of its neighbors and use PSD measurement would be anticompetitive and a disservice to the public interest. AT&T’s premature use of PSD limits would cause increased noise and interference to AT&T’s neighboring CDMA operators, and would confound the meaning of existing service area boundary agreements founded upon Section 22.913.

Waiver of the Commission's rules is appropriate only if (i) special circumstances warrant deviation from the general rules, and (ii) such deviation will serve the public interest.<sup>2</sup> AT&T's circumstances are not special. All wireless carriers are challenged by demand for spectrum to serve data-enabled devices. All seek to maintain a high level quality of customer service. All have timelines for site construction, equipment procurement, testing and budgeting. The FCC should not misuse its waiver discretion when all carriers share the need to quickly roll out advanced services. AT&T casts the waiver as removing disparities among radio services, but it would create disparities between AT&T and all other cellular carriers.

AT&T has not shown good cause to grant the requested waiver. The claim of a need for imminent relief does not override the need of Bluegrass Wireless and other cellular licensees to be protected from harmful interference and reduced coverage, capacity and service quality. AT&T's proposed use of PSD measurements in lieu of Section 22.913 power limits should not be permitted under a waiver of any sort, not even conditioned upon outcome of a rulemaking. Permitting AT&T to invest in its own power protocols prior to completing the rulemaking will favor AT&T with a competitive advantage, and will result in AT&T requesting repeated extensions of its preferential waiver instead of adapting to the outcome of the rulemaking with the rest of the wireless industry.

### **III. Conclusion**

Bluegrass Wireless supports commencement of a rulemaking proceeding to explore update of Section 22.913, possibly incorporating a Power Spectral Density ("PSD") model. At the same time Bluegrass Wireless respectfully requests that a rulemaking be concluded and a

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<sup>2</sup> *NetworkIP, LLC*, 548 F.3d 116, 125-128 (D.C. Cir. 2008); *Northeast Cellular*, 897 F.2d at 1166.

transition period be provided before any cellular carrier is permitted to begin using modified cellular base station power limits. AT&T's circumstances are not unique and do not warrant an individual waiver for its own immediate use of PSD limits. A waiver for AT&T would cause harm to CDMA carriers such as Bluegrass Wireless, and would bring chaos to carriers who have contour consent agreements based on ERP limits. AT&T's request for waiver of current Rule Section 22.913 should be denied.

Respectfully submitted,

BLUGRASS CELLULAR, INC.  
AND AFFILIATES  
D/B/A BLUEGRASS WIRELESS

A handwritten signature in blue ink, appearing to read "David L. Nace".

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